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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,685	09/27/2001	Satoshi Hasegawa	9319S-000287	2845

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EXAMINER

DI GRAZIO, JEANNE A

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 02/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/965,685

Applicant(s)

HASEGAWA ET AL.

Examiner

Jeanne A. Di Grazio

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 5-10 is/are rejected.
- 7) ☒ Claim(s) 6-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

Priority to Japanese Patent Application No. 2000-300861 (September 29, 2000) is claimed.

Preliminary Amendment

Claims 1-4 have been canceled (per Preliminary Amendment of December 14, 2001) and new **claims 5-10 have been added**.

Claim Objections

Claims 6-8 are objected to because of the following informalities: Claims 6-8 depend on claim 1 when they should depend on claim 5. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samworth (US '018 B1) in view of Suzuki et al. (US '858).

Per claim 5: The method step of forming color filters including a plurality of color filters of a predetermined pitch on a substrate is a common method step in the art of color filter formation. Samworth teaches the method steps of transferring a coating liquid from an anilox roller onto a projection formed on a letterpress and transferring the

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coating liquid from the projection onto a substrate (Col. 1, Lines 21-33, Fig. 1, and Col. 1, Lines 43-47, and Col. 1, Lines 55-57). Samworth does not appear to specify the formation of color filters (and the like as applied to electro-optic devices) rather, Samworth teaches a method for forming flexographic printing plates; however, Suzuki does teach that patterned organic films can be formed in a flexographic process and these films include color filters, alignment films, and insulating films all adaptable to liquid crystal devices (Col. 2, Lines 30-31, 34-35, and 37-38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Samworth in view of Suzuki to form color filters by a flexographic process because such a process is rather simple and can be accomplished inexpensively. Samworth furthermore teaches that in order to form the flexographic printing plates, it is desirable that the plates and cells on the anilox roller form a small acute angle – meaning that these plates and anilox roller cells roughly correlate with each other (Col. 2, Lines 34-41). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the predetermined pitch of color filters, the pitch of meshes on a surface of the anilox roller, and a pitch of meshes on a surface of the projections substantially equal because, as noted in Samworth (Col. 2, Lines 19-25) “[d]ue to product competition, the market requirements on the printing quality of ... images ... are becoming very stringent. There is thus a need for flexographic printing plates that ... deliver a better quality image.”

Per claim 6: The examiner respectfully directs applicant's attention to the examiner's analysis and rejection of claim 5.

Per claim 7: Alignment films are commonly used in the art for controlling the alignment state of liquid crystal molecules (or other electro-optic devices). Note that Suzuki teaches that the flexographic process can be adapted to the formation of alignment films as noted with respect to claim 5.

2. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Samworth (US '018 B1) and Suzuki et al. (US '858) in view of Dadowski et al. (US '986).

Per claim 8: Samworth does not appear to specify that a film is formed on a dummy substrate by flexography before the film is formed by flexography on a front side of a substrate; however, Dadowski teaches that screen like images can be formed directly on a negative rather than on a separate screen (Col. 5, Lines 24-26) suggesting that images could be formed on a separate screen (or substrate) and then transferred to another substrate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Samworth in view of Dadowski so that errors could be detected and corrected before a film is mounted on a desired substrate.

3. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Samworth (US '018 B1), Suzuki et al. (US '858), and Zhang et al. (US '470 B1) in view of Tanada et al. (EP 1 189 097 A2).

Per claim 9: Claim 9 repeats elements of claims 5 and 6 but adds further limitations. The elements of claim 9 concerning the anilox roller and pitches of color filters, meshes on the anilox roller, and meshes on projections have already been addressed with respect to claims 5 and 6. Samworth does not appear to specify the forming of a planarizing film on a color filter, forming an electrode pattern on the

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planarizing film, forming an overcoating film on the electrode pattern, and forming an alignment film on the overcoating film; however, Zhang has a pixel electrode on a planarizing film (Col. 8, Lines 48-50), color resin films covered with a planarizing dielectric film (Col. 2, Lines 66-67), and an orientation film covering an electrode pattern (Col. 2, Lines 50-51). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Samworth in view of Zhang for a peripheral circuit integrated liquid crystal display apparatus having high integration and high performance as noted in Zhang. Samworth does not appear to have the step of forming a first and second terminal region along edges of a substrate where the edges do not contain an overcoat film and alignment film; however, Tanada et al. does have an overcoat film and alignment film on the inner surface of a substrate (Page 3, Lines 13-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Samworth in view of Tanada to reduce thickness of the device as noted in Tanada. The step of cutting a substrate into plural substrates is a common method step in the art for the production of single-step multiple panels.

Per claim 10: The examiner respectfully directs applicant's attention to the examiner's analysis and rejection of claims 5 and 6.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (703)305-7009. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-8741 for regular communications and (703)746-8741 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Jeanne Andrea Di Grazio

Robert Kim, SPE

JDG
February 4, 2003


TOANTON
PRIMARY EXAMINER